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FISH & RICHARDSON, P.C.
PO BOX 1022
MINNEAPOLIS, MN 55440-1022

EXAMINER
HILLERY, NATHAN

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Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 May 2006*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

DETAILED ACTION

1.   This action is responsive to communications: RCE filed on 5/26/06.

2.   Claims 1 – 29 are pending in the case. Claims 1 and 15 are independent.

3.   The rejection of claims 1 - 29 under 35 U.S.C. 101 as being nonstatutory has
been maintained.

4.   The rejection of claims 1 - 29 under 35 U.S.C. 112, first and second paragraphs
as lacking enablement and being indefinite, respectively, have been changed as
necessitated by amendment.

5.   The rejection of claims under 35 U.S.C. 102(e) as being anticipatory has been
changed as necessitated by amendment.

6.   The rejection of claims under 35 U.S.C. 103(a) as being unpatentable has been
changed as necessitated by amendment.

Continued Examination Under 37 CFR 1.114

7.   A request for continued examination under 37 CFR 1.114, including the fee set
forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this
application is eligible for continued examination under 37 CFR 1.114, and the fee set
forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action
has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/2/06
has been entered.

Claim Rejections - 35 USC § 101

8.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

9.   Claims 1 – 29 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 1 – 29 have no practical application as claimed because there is no physical transformation and no production of a concrete, useful and tangible result.

    a.   The claimed invention remains in the abstract and nothing is made available to the user; thus it does not produce a tangible result.

    b.   The claims appear to be in the preliminary stages and fall short of the disclosed practical utility. In other words, the claims fail to fulfill and/or reflect the specific, substantial, and credible utility sought by the disclosed invention, and thus do not produce a useful result.

10.   Consequently, the claims are nonstatutory. The claims simply recite receiving and mapping data without producing a concrete, useful, and tangible result.

11.   Further, to expedite a complete examination of the instant application the claims rejected under 35 U.S.C. 101 (nonstatutory) above are further rejected as set forth below in anticipation of applicant amending these claims to make them statutory.

Claim Rejections - 35 USC § 112

12.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

13.   Claims 1 – 14 and 22 – 25 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for "identifying and representing the correspondence between the customization settings, and hence the customization of data variable, in the first and second systems" (Specification, p 9, lines 3 – 5), does not reasonably provide enablement for "identifying and representing a correspondence between the first representation and the second representation using a set of data activities performed in accordance with a set of machine-readable instructions" as recited in claim 1. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims.

Specifically, claim 1 recites, "identifying and representing a correspondence between the first representation and the second representation <u>using a set of data activities performed in accordance with a set of machine-readable instructions</u>". It is unclear what a set of data activities is and how this set is used to identify and/or represent the correspondence. Applicant argues that support can be found in the Specification on p 9 at lines 3 – 5. However, this citation simply discloses, "In mapping, the integration engine can identify and represent the correspondence between the customization settings, and hence the customization of data variable, in the first and second systems." Consequently, it is unclear how this method step is to be carried out within the broadest, reasonable interpretation in light of the specification.

14.   Claims 1 – 14 and 22 – 25 are rejected under 35 U.S.C. 112, first paragraph, as

failing to comply with the written description requirement. The claim(s) contains subject

matter which was not described in the specification in such a way as to reasonably

convey to one skilled in the relevant art that the inventor(s), at the time the application

was filed, had possession of the claimed invention.

Specifically, there is no support explicitly or implicitly for the claimed limitations

"identifying a correspondence between the first representation and the second

representation using a set of data activities performed in accordance with a set of

machine-readable instructions" and "representing the correspondence using the set of

data activities performed in accordance with the set of machine-readable instructions".

Applicant simply cites the Specification on p 9 at lines 3 – 5 as providing support.

However, this citation simply discloses, "In mapping, the integration engine can identify

and represent the correspondence between the customization settings, and hence the

customization of data variable, in the first and second systems." It does not disclose that

the identifying and representing is performed "using a set of data activities performed in

accordance with a set of machine-readable instructions" as recited in claim 1.

15.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

16.   Claims 1 – 14 and 22 – 25 are rejected under 35 U.S.C. 112, second paragraph,

as being indefinite for failing to particularly point out and distinctly claim the subject

matter which applicant regards as the invention.

Specifically, claim 1 recites, "identifying and representing a correspondence between the first representation and the second representation <u>using a set of data activities performed in accordance with a set of machine-readable instructions</u>". It is unclear what a set of data activities is and how this set is used to identify and/or represent the correspondence. Applicant argues that support can be found in the Specification on p 9 at lines 3 – 5. However, this citation simply discloses, "In mapping, the integration engine can identify and represent the correspondence between the customization settings, and hence the customization of data variable, in the first and second systems." Consequently, it is unclear how this method step is to be carried out within the broadest, reasonable interpretation in light of the specification.

Further, there is no explicit and deliberate definition of "data activity" in the specification. Also, there is no intrinsic evidence provided by the disclosure to fairly convey to one of ordinary skill in the pertinent art how the claimed method steps, "identifying and representing a correspondence between the first representation and the second representation <u>using a set of data activities performed in accordance with a set of machine-readable instructions</u>", should be reasonably interpreted within the broadest, reasonable interpretation in light of the specification.

17.   Regarding claims 2 – 14 and 22 – 25, the claims are rejected for fully incorporating all the deficiencies of the base claim(s) from which they depend.

Claim Rejections - 35 USC § 102

18.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

19.   Claims 1 – 4, 7, and 9 – 22 are rejected under 35 U.S.C. 102(e) as being

anticipated by Granade et al. (US 20020103881 A1).

It should be noted that "data structure" has been interpreted as including a file.

The basis for this interpretation can be found in the Specification on page 7 at lines 1 &

2, which states that examples of common data structures include files ... and objects.

20.   **Regarding independent claim 1**, Granade et al. teach that Integration manager

202 receives requests in an intermediary language such as XML and then invokes a

method in a language or format appropriate for the particular application on backend

systems 102 (paragraph block 0042), which meets the limitation of **receiving**

information describing a first representation of data variable information in a first

data structure in a first data processing system. It should be noted that the mobile

application platform (Fig 1.108) is equivalent to the claimed first data processing

system, the XML file equivalent to the claimed first data structure, the contents of the

XML file equivalent to the first representation of data variable information.

Granade et al. teach that for data communication, mobile presentation server 114 selects one of WML 310, HDML 312, HTML 314, or other data device adaptor 316 to transmit data information to a display associated with mobile device 106 (paragraph block 0046), which meets the limitation of **receiving information describing a second representation of the data variable information in a second data structure in a second data processing system**, since the mobile device will receive one of file formats WML, HDML, HTML, etc. making the mobile device equivalent to the claimed second data processing system, the file format equivalent to the claimed second data structure. The contents of the WML, HDML, or HTML file equivalent to the claimed second representation of the data variable information.

Granade et al. teach that Mobile application server 112 invokes methods on behalf of mobile devices 106 to access backend systems 102. The results from various backend systems 102 are converted to an intermediary language compatible with XML and passed to mobile presentation server 114 for adaptation to the particular mobile device. Mobile presentation server 114 identifies the characteristics of the mobile device including display size and browser type and modifies the information for presentation on the mobile device in the most suitable format. For example, mobile presentation server 114 can modify the resolution of an image to fit the display of a particular mobile device (paragraph 0029), which meets the limitation of **mapping the first representation of the data variable information to the second representation of the data variable information, the mapping comprising: identifying a correspondence between the first representation and the second representation**

using a set of data activities performed in accordance with a set of machine-readable instructions and **representing the correspondence using the set of data activities performed in accordance with the set of machine-readable instructions.** It should be noted that the XML is equivalent to the claimed first representation, the most suitable format equivalent to the claimed second representation, converting the XML into the most suitable format equivalent to the claimed mapping.

Further, it should be noted that converting from one file format to another necessarily requires mapping that includes identifying a correspondence between elements in each format. Also, in so far as can be understood based on the rejections under 35 USC 112 and relying on the regular and ordinary meaning in the art, the Office has interpreted "the identification of characteristics of the mobile device" to be equivalent to the claimed "a set of data activities" and "the modifications to the information for presentation on the mobile device" to be equivalent to the claimed "a set of machine-readable instructions".

Regarding dependent claims 2 and 9, Granade et al. teach that Mobile application server 112 invokes methods on behalf of mobile devices 106 to access backend systems 102. The results from various backend systems 102 are converted to an intermediary language compatible with XML and passed to mobile presentation server 114 for adaptation to the particular mobile device. Mobile presentation server 114 identifies the characteristics of the mobile device including display size and browser type and modifies the information for presentation on the mobile device in the most

suitable format. For example, mobile presentation server 114 can modify the resolution

of an image to fit the display of a particular mobile device (paragraph 0029), which

meets the limitation of **mapping the first representation to the second**

representation further comprises establishing machine-readable instructions for

changing the first representation of the data variable information in the first data

processing system to the second representation of the data variable information

in the second data processing system. It should be noted that the XML is equivalent

to the claimed first representation, the most suitable format equivalent to the claimed

second representation, converting the XML into the most suitable format equivalent to

the claimed mapping and changing.

21.   **Regarding dependent claim 3**, Granade et al. teach that Locale information

provided to the application by localization component 210 specifies how to tailor

information for a particular country, region or culture. In many applications a locale

variable causes the application to generate information in a preferred language,

currency, date/time format and other information peculiar to the geographic or cultural

region (paragraph block 0037), which meets the limitation of **establishing the**

machine-readable instructions comprises establishing a criterion for identifying

the data variable in a first data structure, since the information generated by the

locale variable represents the content of the XML file, which is equivalent to the claimed

first data structure as explained in the rejection of claim 1.

22.   **Regarding dependent claim 4**, Grenade et al. teach that data dialog manager

218 is responsive to data compatible with XML and receives additional formatting

control for displaying XML using style sheets compatible with Extensible Stylesheet

Language (XSL) (paragraph block 0041), which meets the limitation of **establishing**

machine-readable instructions comprises establishing an extensible stylesheet

language (XSL) file that describes how to change the first representation of the

data variable information.

23.   **Regarding dependent claim 7**, Granade et al. teach that Locale information

provided to the application by localization component 210 specifies how to tailor

information for a particular country, region or culture. In many applications a locale

variable causes the application to generate information in a preferred language,

currency, date/time format and other information peculiar to the geographic or cultural

region (paragraph block 0037), which meets the limitation of **the machine-readable**

instructions comprise instructions for identifying the data variable in a data

structure, since the information generated by the locale variable represents the content

of the XML file, which is equivalent to the claimed first data structure as explained in the

rejection of claim 1.

24.   **Regarding dependent claim 10**, Granade et al. teach that Locale information

provided to the application by localization component 210 specifies how to tailor

information for a particular country, region or culture. In many applications a locale

variable causes the application to generate information in a preferred language,

currency, date/time format and other information peculiar to the geographic or cultural

region (paragraph block 0037), which meets the limitation of **receiving a trigger for the**

mapping, the trigger identifying a data object class that includes the data

variable.

25.   **Regarding dependent claim 11**, Granade et al. teach that FIG. 3 is a block

diagram of mobile application presentation server 114 used by the system in FIG. 1 to

properly present data and voice information to mobile devices 106. Mobile application

presentation server 114 includes a universal device library (UDL) 302. Of course, the

more accurately one can identify the features and capabilities of a mobile device then

the more precisely and efficiently information can be presented. UDL 302 stores this

information (paragraph blocks 0043 & 0044), which meets the limitation of **storing**

results of the mapping in a collection of mapping results.

26.   **Regarding dependent claim 12**, Granade et al. teach that Mobile presentation

server 114 selects the voice, data or voice and data device adaptors for presenting on

mobile devices by analyzing a stream of data transmitted and received by the target

mobile device. This locates an entry in UDL 302 that identifies voice and data

capabilities of the mobile device. Depending on the voice device adaptor selected, a

different voice dialog may be accessed and retrieved from application repository 116

(paragraph block 0045), which meets the limitation of **the information describing the**

first representation of data variable information comprises instructions for

locating the information in the first data processing system.

27.   **Regarding dependent claim 13,** Granade et al. teach that Integration manager

202 receives requests in an intermediary language such as XML and then invokes a

method in a language or format appropriate for the particular application on backend

systems 102 (paragraph block 0042), which meets the limitation of **the information**

describing the first representation of data variable information comprises the first

representation of data variable information.

28.   **Regarding dependent claim 14,** Granade et al. teach that a developer uses

application builder 402 to create application metadata and other information describing

the interaction of an application in an intermediary language. Mobile application

presentation server 114 in FIG. 3 uses this metadata and other information to create

menus, forms, messages and other user-interface elements in a language appropriate

for display on the target mobile device. The metadata provides mobile application

presentation server 114 with abstract descriptions of the application operation and

assists in generating platform specific code to display these elements on the mobile

display (paragraph block 0048), which meets the limitation of **receiving instructions**

for data interfacing with the first data processing system; and adding the

interfacing instructions to results of the mapping.

29.   **Regarding claims 15 – 21**, the claims incorporate substantially similar subject

as claims 1, 2, 7, 9, 12, 13 and are rejected along the same rationale.

30.   **Regarding dependent claims 22 – 29**, Granade et al. teach that the results are

converted to an intermediary language compatible with XML and passed to mobile

presentation server 114 for adaptation to the particular mobile device (paragraph block

0029), which meets the limitations of **the first representation specifies a language of**

the information in the data variable; the first representation specifies a unit of the

information in the data variable; the first representation specifies a notation of the

information in the data variable; the first representation specifies a format of the

information in the data variable.

Claim Rejections - 35 USC § 103

31.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

32.   Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Granade

et al. (US 20020103881 A1) as applied to claims 1, 2, and 7 above, and further in view

of W3C (XSLT [as cited by Applicant]).

33. **Regarding dependent claim 8**, Granade et al. do not explicitly teach **the instructions for identifying the data variable comprise an Xpath expression for identifying an object of an object class that includes the data variable**.

However, it would have been obvious to one of ordinary skill in the art at the time of the invention to be well aware that if the data variable to be mapped is part of a larger data structure, it must be identified in that data structure. Also, in the context of XSL transformations (XSLT), the use of Xpath expressions is well-known to those of ordinary skill in the art as a way to achieve such functionality, as is further evidenced by W3C, which teaches that *XSLT makes use of the expression language defined by (XPath) for selecting elements for processing...*(page 4, paragraph 3), which meets the limitation of **the instructions for identifying the data variable comprise an Xpath expression for identifying an object of an object class that includes the data variable**.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of Granade et al. with that of W3C because such a combination would provide the users of Granade et al. with W3C's detailed recommendation, which specifies XSLT transformations.

34. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Granade et al. (US 20020103881 A1) as applied to claims 1 and 2 above, and further in view of REEUWIJK (TM [as cited by Applicant]).

35.   **Regarding dependent claim 5**, Granade et al. do not explicitly teach

establishing the machine-readable instructions comprises: receiving a framework

for instructions; and inserting instructions into the framework.

However, REEUWIJK teach that *Tm code generation is based on templates:*

source texts for the target programming language interspersed with text-substitution and

repetition commands for Tm (page 900, lines 4-5) and that *Using the templates and the*

data-structure definitions, code can be generated ... (page 900, line 12), which meets

the limitations of **establishing the machine-readable instructions comprises:**

receiving a framework for instructions; and inserting instructions into the

framework.

It would have been obvious to one of ordinary skill in the art at the time of the

invention to combine the invention of Granade et al. with that of REEUWIJK because

such a combination would provide the users of Granade et al. with a code generator for

recursive data structure software.

36.   Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Granade

et al. (US 20020103881 A1) as applied to claims 1 and 2 above, and further in view of

GRAHAM ET AL. (Sigplan Symposium [as cited by Applicant]).

37.   **Regarding dependent claim 6**, Granade et al. do not explicitly teach

establishing the machine-readable instructions comprises selecting a germane

instruction for transforming first representation to the second representation

from a collection of instructions for transforming the first representation to the

second representation.

However, GRAHAM ET AL. teach ... an approach to code generation in which

instructions are selected by a pattern-matching process that chooses instructions from a

table ... (page 32, lines 16-19), which meets the limitation of **establishing the machine-**

readable instructions comprises selecting a germane instruction for transforming

first representation to the second representation from a collection of instructions

for transforming the first representation to the second representation.

It would have been obvious to one of ordinary skill in the art at the time of the

invention to combine the invention of Granade et al. with that of GRAHAM ET AL.

because such a combination would provide the users of Granade et al. with table driven

code generation.

Response to Arguments

38.   Applicant's arguments filed 5/26/06 have been fully considered but they are not

persuasive.

39.   In response to Applicant's arguments that the claimed inventions produce a

result (pp 9 & 10) because claim 2 recites establishing machine-readable instructions.

40.   The Office disagrees.

41.   Whether or not the claimed invention produces a result is mute. As explained in

the rejection under 35 USC 101 above, the claimed invention does not produce a

tangible, concrete and useful result.

42.   In response to Applicant's arguments that the claims are statutory (p 11) because

the data transformation described by the claimed invention is a practical application.

43.   The Office disagrees.

44.   The Interim Guidelines fully state on page 20 as partially cited by Applicant:

> For eligibility analysis, physical transformation "is not an invariable
>
> requirement, but merely one example of how a mathematical algorithm
>
> [or law of nature] may bring about a useful application." AT&T, 172 F.3d
>
> at 1358-59, 50 USPQ2d at 1452. **If the examiner determines that the**
>
> **claim does not entail the transformation of an article, then the**
>
> **examiner shall review the claim to determine if the claim provides a**
>
> **practical application that produces a useful, tangible and concrete**
>
> **result.** If the examiner does not find such a practical application, the
>
> examiner has determined that the claim is nonstatutory.

45.   In this case, the Office has determined that the claimed invention does not

describe a physical transformation, since the transformation outlined in the claims is a

data transformation. Further, as explained in the rejection under 35 USC 101 above, the

claimed invention does not produce a concrete, useful and tangible result. It should be

noted that applicant is advised to particularly point out the "result" of the claimed

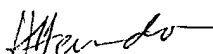invention and explain how that result is concrete, useful and tangible.

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Nathan Hillery whose telephone number is (571) 272-

4091. The examiner can normally be reached on M - F, 10:30 a.m. - 7:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather R. Herndon can be reached on (571) 272-4136. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NH

HEATHER R. HERNDON
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100